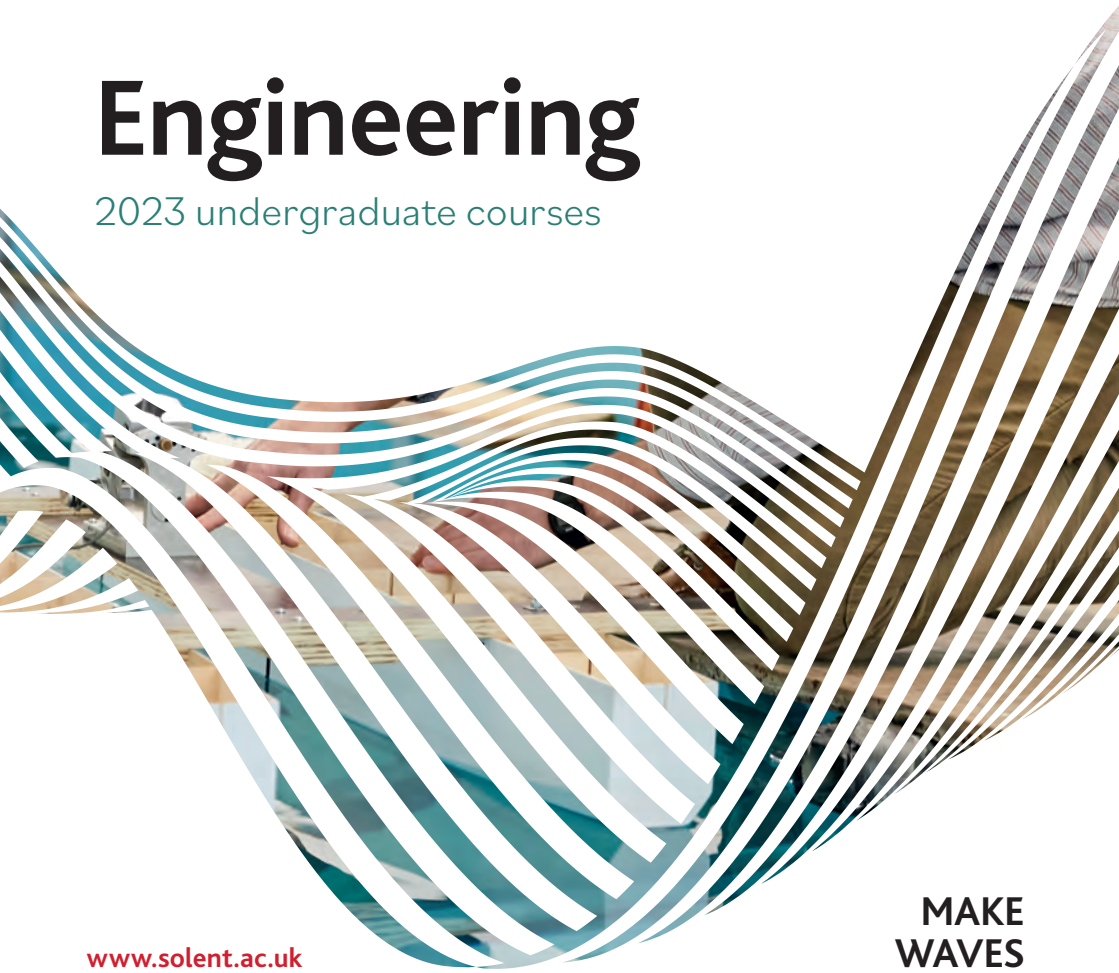
SOLENT UNIVERSITY SOUTHAMPTON

Engineering

2023 undergraduate courses



www.solent.ac.uk

MAKE WAVES

You have good numerical skills, a curious mind and a desire to find solutions. Enter a career in engineering and you could join the best-paid graduates in the world.

Our highly qualified and experienced team has excellent working relationships with professionals and organisations. And our specialised, industry-standard courses – such as electronic, mechanical and renewable energy engineering – will put you on the path towards a rewarding and future-proof career.

You'll have the ability to create new products or improve existing ones. You could be an electronic engineer, designing home appliances or life-saving medical equipment. As a mechanical or renewable energy engineer you could improve infrastructure in cities, develop sustainable energy sources or improve performance in aerospace and automotive engineering.

Hugely respected in the industry, our yacht engineering courses reflect Southampton's dockland heritage, as well as the city's vital position as a major international port. Graduates go on to build everything from racing yachts to high-speed powerboats to luxury superyachts.

Access to specialist facilities

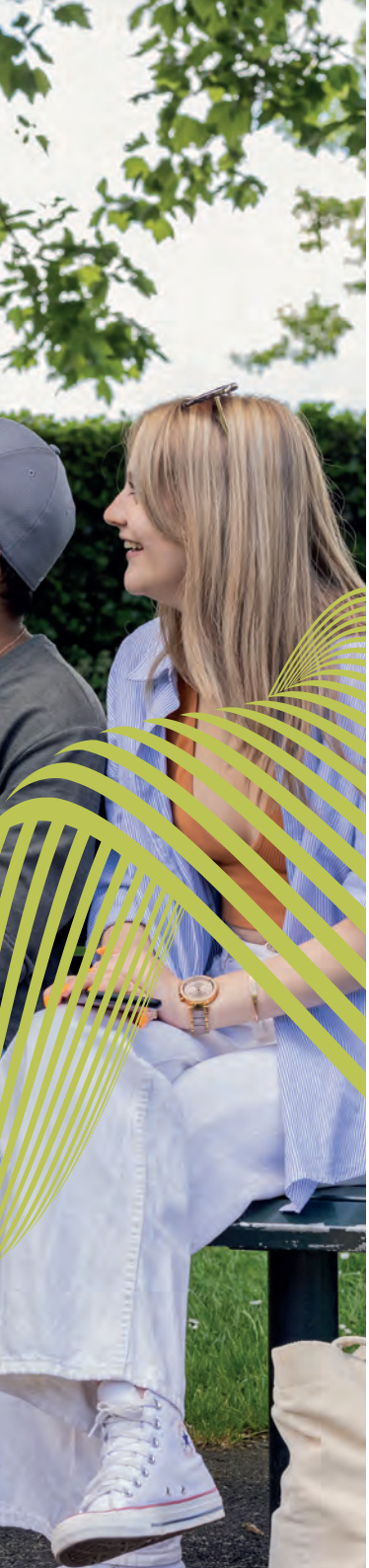
Throughout your studies you'll use our state-of-the-art facilities to support your practical learning, supported by a team of dedicated technical instructors with specialist knowledge to help provide training on the latest equipment and techniques. This includes 3D printers to support our engineering courses, and a hydrodynamic test centre to test marine renewable energy devices and yacht and boat designs.

Taught by professionals, with extensive links to industry experts

Our academics have vast professional experience, and many maintain strong links with industry experts. This helps to ensure that course content is up to date with industry needs, and also allows you to benefit from guest lecturers who can share valuable insight.

Real-world experience

Work experience is an important aspect of all our courses, and our network of highly influential connections out in the industry – everything from world-renowned yacht designers to our far-flung engineering grads – offers plenty of opportunities for interaction with industry professionals. Some degree students will also have the option to undertake a work placement year between the second and third years of study.



Our great city

With close to 25,000 businesses in knowledge-intensive sectors, employing 163,000 people across the region, we're ideally placed for graduate jobs.

Southampton is a vibrant maritime city at the heart of a healthy and growing regional economy. It's been one of the top three cities in PwC's Good Growth for Cities index for three years running, and it's home to some of the UK's flagship organisations, including Ordnance Survey, B&Q, Carnival and Ageas – as well as being a hub of maritime design and production excellence.

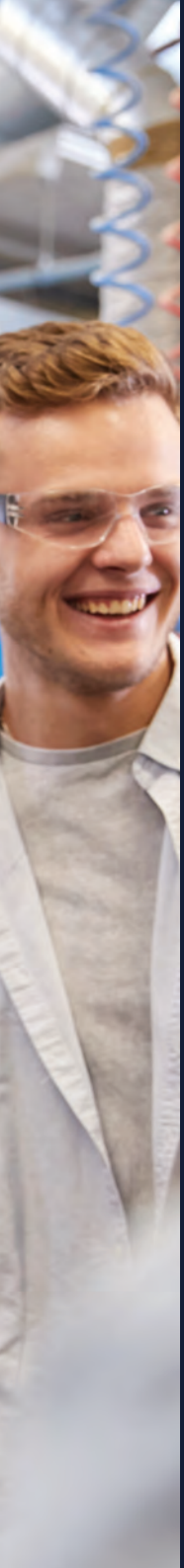
Hampshire is recognised as one of the most successful economies in the UK and has the largest sub-regional economy in the south east of England, with economic output totalling £50 billion. Southern England enjoys the largest business population in the UK, and the finance and business sector in Hampshire and the Isle of Wight is worth around £4.5 billion.

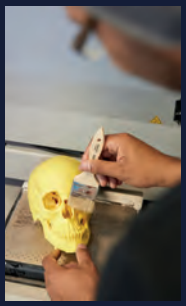
The region hosts premier companies at the top end of engineering opportunity, including Rolls-Royce, Coopervision, GE Aviation and NATS.

The city of Southampton also boasts Premier League football, world-class sailing and international cricket. It has a wealth of live music venues, theatres and exhibitions, and was shortlisted for UK City of Culture 2025. The city's historic walls and old town bring to life Southampton's rich maritime heritage, with major redevelopments complementing this and bringing new leisure, retail and employment opportunities into the heart of the city.

Engineer a great career

Gain the hands-on skills employers are looking for. It all starts with our range of electronics, manufacturing and yacht design courses.





Specialist facilities and equipment

- 3D printing equipment and laser cutters.
- Rapid prototyping and non-destructive testing kit.
- Dedicated labs for applied mechanics, materials, electronic engineering, manufacturing and robotics.
- Specialist equipment – PSpice/ NI MultiSim software and microcomputer and microcontroller development systems, digital multi-meter signal generators, FLIR cameras and digital signal processing (DSP) boards.
- Yacht design workshops.
- Stability tank.
- A 60-metre hydrodynamic test tank with computer-controlled wave generator for testing yacht and boat designs and renewable energy devices.

Why Solent?

- Guest lectures and live briefs give engineering students the chance to network with industry practitioners and experts. Final-year engineering projects are informed by real-world industry challenges and students' personal areas of interest.
- The library features a fully networked resource centre equipped with high-end Macs and PCs and an extensive selection of both open plan and private group working spaces.
- The opportunity to gain professional qualifications alongside your degree, including project management and CIM.
- Built-in placement opportunities.
- Support and funding for student/ graduate start-ups.

Alexander James Lee

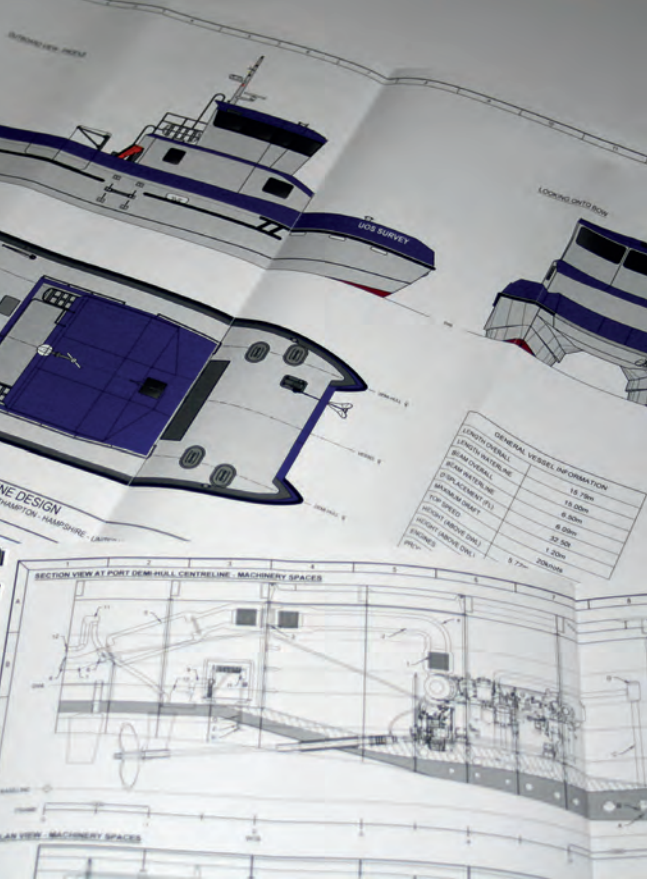
Naval Architect, Laurent Giles Naval Architects

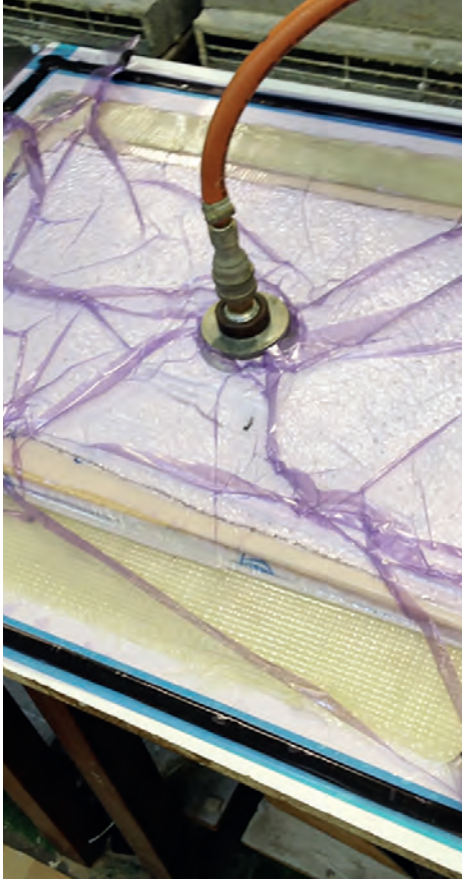
BEng (Hons) Yacht Design and Production, 2017

How did university prepare you for your career?
The yacht engineering courses at Solent University provide you with the knowledge and software familiarity required to step into the industry and continue your professional development. Going into the superyacht industry, I have been equipped to deal with a range of tasks, from preliminary design to production drawings for boats almost ten times the length of my dissertation!

Favourite Solent memory?
Taking part in the model yacht race at the end of the first year. I loved designing and manufacturing my model, but seeing it race was fantastic. One of the best things about this line of work is seeing something you design come to fruition.

“This course is for you if you have a passion for design, engineering and all things boats!”





Tell us a little about your career story so far.
After finishing university I was awarded the RINA-BAE Systems Student Naval Architect award for the best final-year project and the RINA and IMarEST Southern Joint Branch prize for the top final-year student in the same year. This led to my employment at Laurent Giles Naval Architects, where I complete preliminary design work, 3D modelling and production drawings for large yachts and superyachts.

Tell us about what you are doing now and what it involves – a typical working day.
Three hours of design (preliminary or for production), three hours of 3D modelling, two hours of report writing and don't forget lunch! Every day is different though!

What's your career highlight so far?
I recently visited one of our projects in build, which was fantastic to see because it brings all of the drawings produced to life. I also attended the Fort Lauderdale International Boat Show, which was an incredible experience.

What tips would you give to someone wanting a career in your industry?
Work hard and be open-minded. I started off the degree with a love for sailing and sailing yachts, but I quickly discovered the wonder of the engineering behind the motor yacht.

Elodie Grenen

Graduate Naval Architect, Babcock International
BEng (Hons) Yacht Design and Production, 2020

What was it about Solent University which made you think 'this is the place'?
After visiting several universities which offered marine engineering courses I chose Solent University as it was the only university in the UK which offered a yacht design course with a highly practical aspect to it. This was a huge appeal to me, being someone who learns more through the practical application of taught skills. On visiting the University it was clear that they had extremely good resources for the students, and the staff were absolutely lovely and clearly dedicated to supporting students.

What first got you interested in engineering?
As a kid I was always playing with Lego and Lego Technic when my friends would be playing with more stereotypical toys for young girls. I was fortunate enough to be brought up in a very rural area where I spent my days building dens and racetracks for our bikes and go-karts – even from a young age I was doing engineering-related stuff!

At ten I was introduced to sailing and it has been a passion and hobby ever since. I then went on to study more 'engineering'-orientated subjects for my A-levels which eventually helped me to gain a place at Solent.

I have worked in chandleries designing mooring setups for sailing and motor vessels, so problem-solving and design have been incorporated into my personal life, hobbies, summer jobs and education from a young age.

What was the best thing about your course?
The facilities are amazing, with FRP labs, and a CAD suite specifically for use by yacht design students. Plus every lecturer on the course has been absolutely fantastic and really supportive. They are constantly adapting their teaching to make sure we get the most out of our lectures, and during COVID they have been phenomenal in making sure that all of our online content has been engaging and easy to follow.

How have your studies helped you prepare for a career in the industry?
I got practice in designing vessels and developing an understanding of classification society rules which actually proved invaluable for me when I had to go for an interview with Babcock for their graduate naval architect scheme. We also had several assignments where we had to do an interview-style presentation, which has also proved to be extremely useful when applying for jobs.

"I have always loved the problem-solving aspects of engineering as this encourages me to achieve my best work."

What did you learn or study which really made you go 'wow'?
I have developed 3D modelling skills which have been awesome to learn and definitely very cool! I have also loved the resistance and propulsion aspect of our course which helps predict how much power a vessel needs to achieve design speeds, along with what size propellers they should have – along with many other things!

What opportunities were there to get practical experience?
In the first year we had to build model yachts to race at the end of the year – this was a good opportunity to design a boat to a set classification and also build it, even if it was on a model scale! It was a fun and practical application of the skills learnt during our first year at university and brought everyone on the course closer together. We also had an assignment to design a five-metre RIB for pleasure or commercial use, as a result of a company showing interest in the yacht design courses at Solent and the students' potential.

What did you like best about being a Solent student?
The best thing about Solent – apart from the course – was the people. The staff were always so supportive and wanted to see you achieve your best work, and the students were lovely and friendly – having such a large ratio of international students has meant I have made connections not just nationwide, but worldwide. The social life was also good and there are loads of sports clubs at the University which you are able to join!

What did you take away from your time at Solent University? Friends, connections, new opportunities?
Since my time at Solent, I feel like I have become a more confident young person who has been able to push themselves to be recognised in the employment field to successfully gain a job. I have made lots of new connections with people from all sorts of different cultures and walks of life – on the whole, I feel like my time at Solent has been incredibly enriching.

What have you been up to since graduating?
Up until recently, I have predominantly worked summer jobs – these were still marine-based as they were in two chandleries. I have since been able to secure a place working for Babcock on their graduate naval architect scheme. Qualifications are obviously an important part of bagging a successful job, however I have learnt that you do not need to be perfect when you turn up to work because as a student, you simply won't have the experience of older staff. It's more important to an employer that you show up and prove that you are willing to learn and do the work, than to turn up with 100 per cent and a first-class degree.

What tips would you give to someone wanting a career in your industry?
If you have a passion for engineering, follow it. I strongly believe there is no point in choosing a career path that doesn't capture your full interest as you'll struggle to unlock your full potential.

Women are finding places in the engineering field more easily these days and I really urge any young girls or sixth-formers to pursue their interests and push to be the next women in the industry. Times are changing, which is fantastic – if you go in with passion and a strong work ethic, there should be no reason for any employer to doubt your potential.

Engineering at Solent is for you if...
...you love the practical application of theoretical study, you endeavour to achieve your absolute best, you want to make friends from a range of international countries, you want to receive an extremely high standard of education... and if you want to have a uni course experience that doesn't feel challenging because you are doing a course you love!

Josh Bowen

BEng (Hons) Electronic Engineering, 2015

How did university prepare you for your career?
I have seen a lot of universities where academic standing and proprietary research have a much higher priority than their students' studies. Solent has it right, however – with industry-focused courses and lecturers with diverse working backgrounds and experience, I felt confident that what I was learning would give me a good starting point in my career, which it has. The staff were extremely accommodating and easy to talk to, whether it was university-related or not, making Solent University a very comfortable learning environment.

Favourite Solent memory?
I met some good friends while studying at Solent, both students and staff. My entire time at Solent was an enjoyable memory because of them, most notably the amusing conversations we had when working on our group projects and the good results we achieved because of our teamwork.

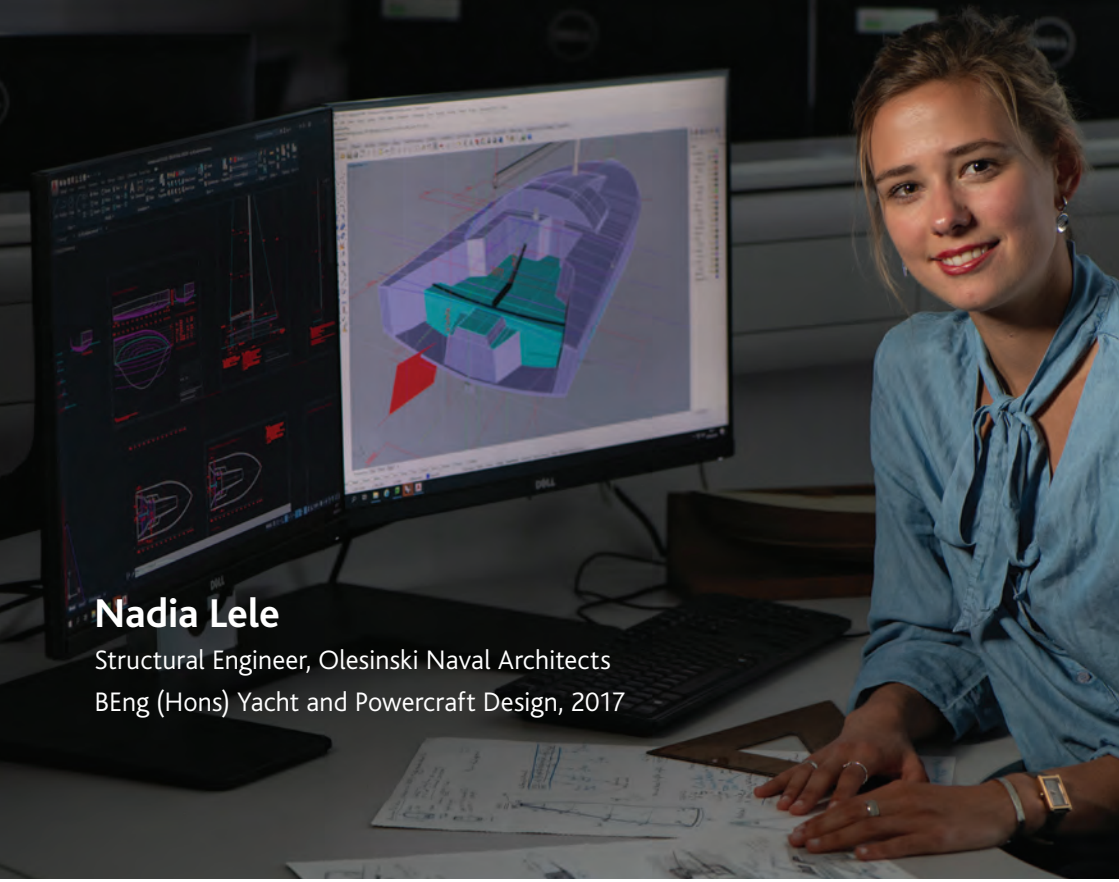
Tell us a little about your career story so far.
I started my career during the summer breaks when I worked for a defence engineering firm. This gave me a good standing for when I graduated to then be selected to be involved in a Knowledge Transfer Partnership, a government scheme between the University and an outside private company – He-Man Dual Controls, a small company dedicated to producing dual control pedals for driving tuition vehicles. I was involved in using the combined expertise of both parties to develop innovative new products. I have since been taken on by the company after they were pleased with my progress and wanted to continue after the project ended.

I am still constantly involved with Solent University, as I find the staff members extremely friendly and open to collaboration and consultation.

Tell us about what you are doing now and what it involves.
As the electronic engineer for He-Man Dual Controls, a typical working day includes overseeing the entire design/development cycle of any new electronic products, as well as developing our other experimental projects. I am also involved in technical sales logistics, which includes the testing of our products to pass different international market standards.

What's your career highlight so far?
Each stepping stone in my career has been memorable so far – from one exciting point to the next – with a new set of challenges and a new opportunity to indulge my passion for engineering. Every challenge helps me learn something new that I can use on subsequent projects, and with my current open-ended career the possibilities of what can be designed and accomplished are endless.

What tips would you give to someone wanting a career in your industry?
If you have the freedom to choose your career, then you should do something you love. Ask yourself the question: would you still do it if you didn't get paid? I love electronics and am constantly volunteering my own time for out-of-work activities, as well as my own projects. If you are looking for a career in engineering, as with any industry, you shouldn't need a reason to give 100 per cent, and by doing this, you will be on the road to success while never having worked a day in your life.



Nadia Lele

Structural Engineer, Olesinski Naval Architects

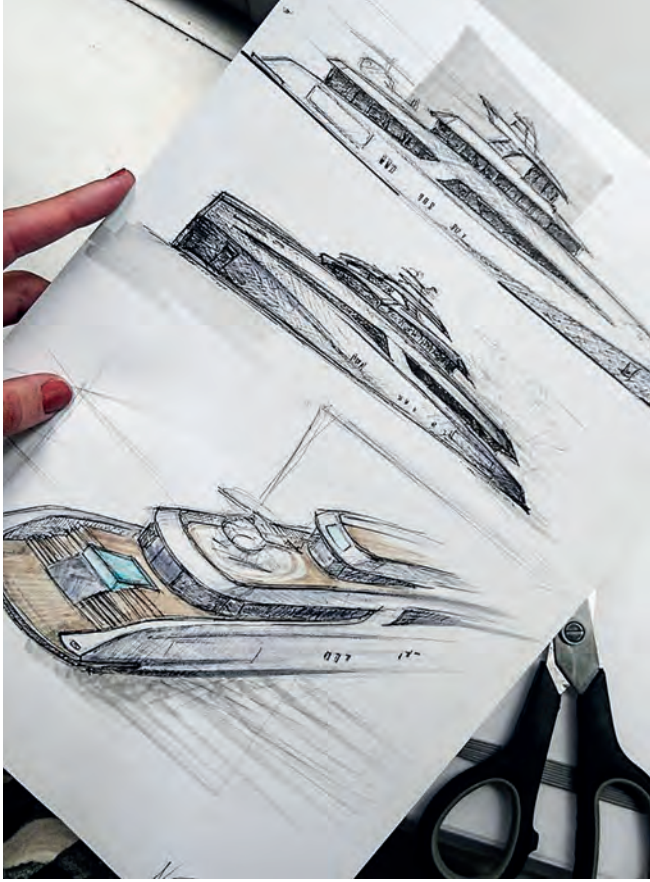
BEng (Hons) Yacht and Powercraft Design, 2017

Favourite Solent memory?

It's hard to select a special uni moment as there were so many. Every person on my course (including our tutors and lecturers) had one thing in common – a strong love of boats – and having a common interest is what makes the course like a big family, which is quite unusual. For our final first-year assignment we had to design a model boat to a box rule using basic principles of naval architecture, build it in the fibre-reinforced plastic (FRP) workshop, and race our little yachts in Gosport. It was a really cool challenge – everyone was really competitive from the beginning and we all had a lot of fun.

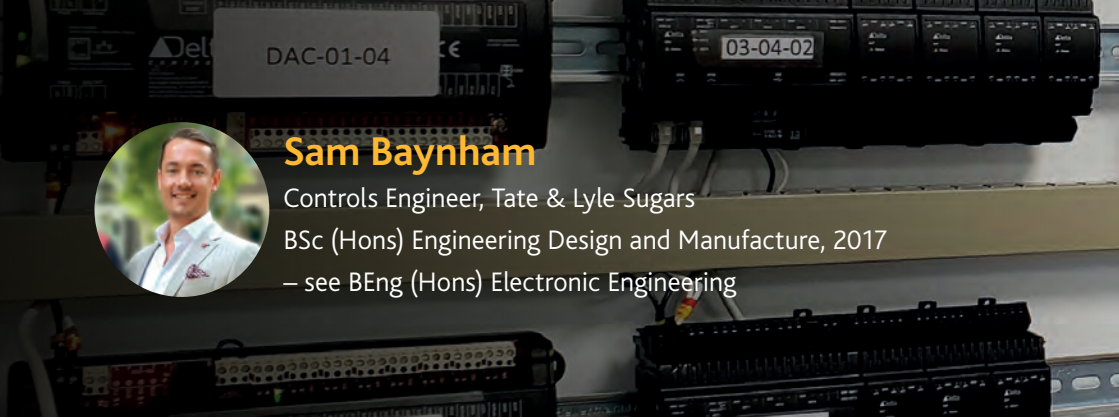
How did university prepare you for your career?

This course absolutely meets the demands of the modern yachting and shipbuilding industry. Access to the towing tank, stability tank, FRP workshop and CAD room – full of the most advanced programs – was vital. It is an engineering course – that is why, apart from knowing the rules, maths and physics, it is important to understand how things work. Group projects are also industry-driven, and reflect real company dynamics. Plus the lecturers have an enormous amount of experience, which inspires you a lot, and they make clear how the industry works. By the end of the course I had a bit of everything – naval architect, structural engineer and stylist knowledge. It was a hard choice what to do next.



Tell us a little about your career story so far.
In my second year I was representing Solent University at the London Boat Show and won a couple of days' work experience at Olesinski Naval Architects, a yacht design company based on the Isle of Wight. This was a prize for second place in the Young Designer Competition held by Superyacht UK and British Marine. Now I work in the company as a structural engineer. We have all three disciplines in-house – design, naval architecture and structural engineering – which is quite rare.

Tell us about what you are doing now and what it involves – a typical working day.
In structures we make things work. One day it is development of the entire hull structure; another day it is analysis of a particular part of the boat, like a giant sliding roof or cleat support laminate. The tasks are so varied and challenging. Mainly we work with composite structures, so it is never boring. We do hand calculations, design lay-ups, create a full representation of all structural elements using 3D modelling and drafting, and complete finite element analysis (FEA) – and thanks to the yacht and powercraft design course, I was absolutely ready to complete all these tasks.



Sam Baynham

Controls Engineer, Tate & Lyle Sugars

BSc (Hons) Engineering Design and Manufacture, 2017

– see BEng (Hons) Electronic Engineering

Why did you pick Solent? What made you think 'this is the place'?
I went through Clearing to get into Solent – the University was local to me and offered an HND in engineering design and manufacture. I didn't achieve the best results in my A-levels, so Solent allowed me to take the next steps to getting onto a degree course.

What was the best thing about your course?
Engineering design and manufacture at Solent is a well-rounded degree that will enable you to enter the industry with a good understanding of the basic principles.

The course leaders were supportive, professional and had a wealth of experience between them, and while I was there the University invested a lot of money into enhancing the facilities on offer to students.

What did you study which really stuck with you over the years?
One module that I found particularly useful was lean manufacturing. We had to work with a local company to run our own continuous improvement initiatives – this was an invaluable experience and gave me a better understanding of the industry.

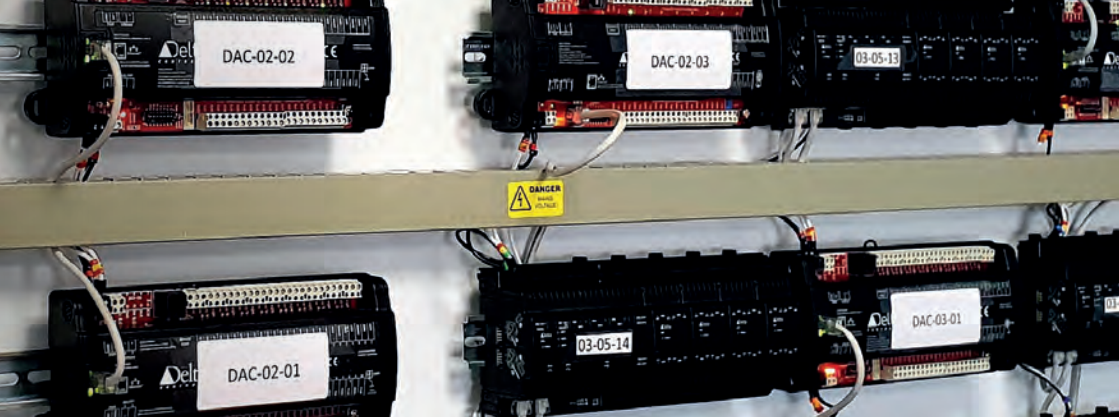
Now, working for a manufacturing company, I often refer back to material I learned in this module, and apply many of the tools we covered for my own continuous improvement initiatives.

What's your favourite Solent memory?
I would have to say my graduation – nothing compares to the feeling of successfully completing your degree. Throughout your whole academic life, it felt as if everything had led to this point and there was this overwhelming sense of excitement, freedom and accomplishment.

What did you like best about being a Solent student?
The University has some great resources on offer to students, but for me the best thing was the social aspect. With two universities in the city, there are a large number of students and plenty to do outside of uni.

I joined the DJ society in my first year at Solent and went on to become President for two years after. We ran our own nights, worked closely with local clubs to help with their student offering, and held weekly lessons for aspiring DJs and producers.

What did you take away from your time at Solent University?
The University is full of creatives and entrepreneurial spirit. I have met people from a diverse range of backgrounds, and made some great friends and connections. The Uni has also opened up a lot of doors for potential career choices, as well as offering support with building a career.



The careers advice is brilliant and there are active schemes to help you set up businesses, including applying for grants and funding through the University.

Tell us a little about your career so far. What were the challenges, starting out?
The biggest challenge, for me, was trying to find a job in the industry with no work experience. I never did a placement or internship – in hindsight, something I would definitely recommend doing – this meant that I was applying for graduate schemes, and these are notoriously difficult to get onto.

But after graduating from Solent, I managed to join an HVAC manufacturer on their six-month graduate scheme, which eventually opened the door for a position in their controls department. I led my own projects, designed heating systems for major building projects in London, and developed software that has been rolled out on hundreds of PLC controllers.

What's the best thing about your industry?
There's nothing more satisfying than simplifying and automating something. I enjoy making things easier for people, and the automation industry allows you to be creative in doing so.

But the best thing is that automation is a growing industry with a shortage of engineers – this means there are plenty of jobs on offer across different manufacturing sectors. I actually lost my job during the COVID-19 outbreak, but I'm now starting a new position as a controls engineer at Tate & Lyle.

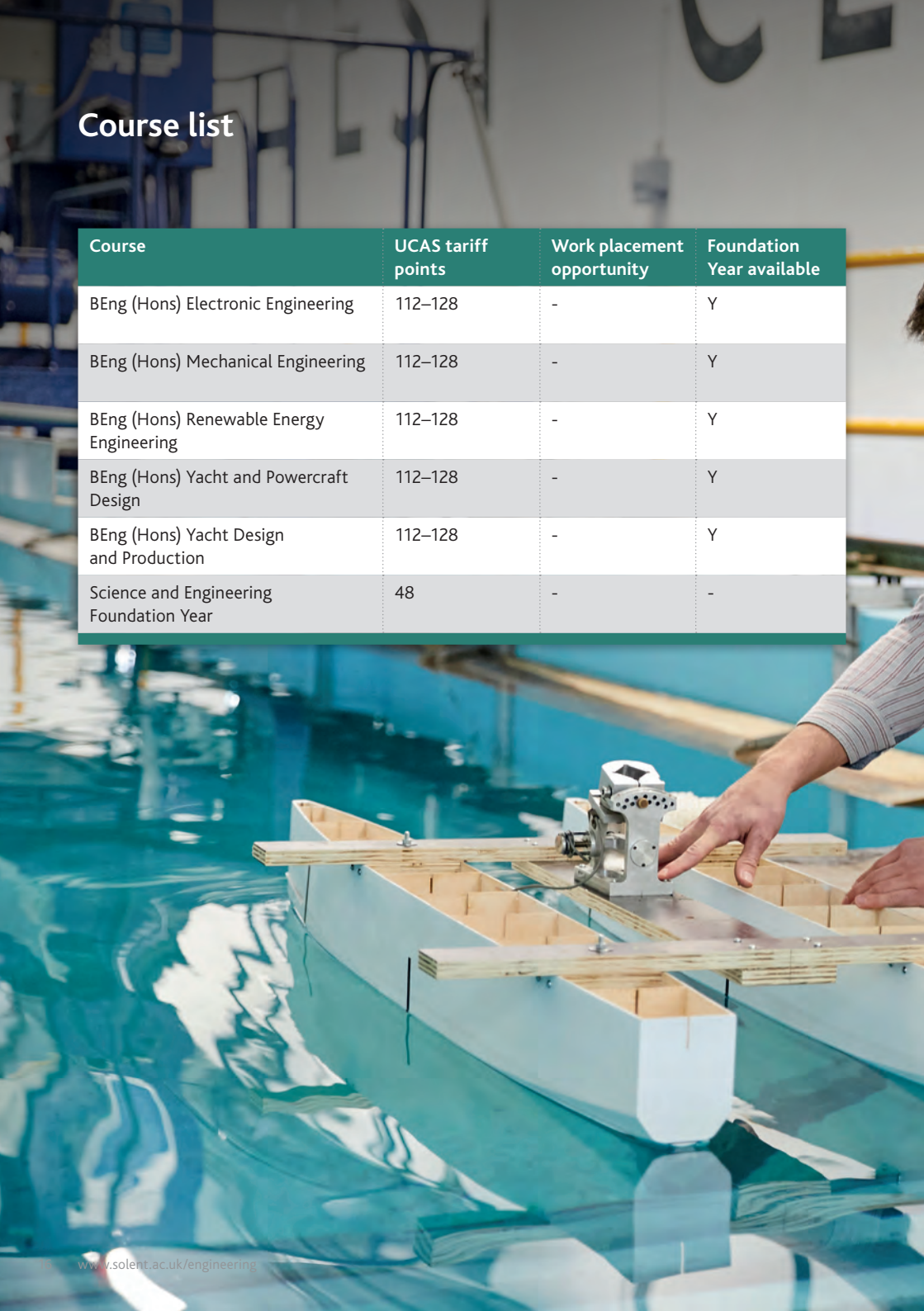
Prior to this, my typical working day would see me managing controls projects, liaising with customers, writing software, debugging issues on site, creating/mapping graphical user interfaces and working on research and development projects.

There are a lot of transferable skills across industries. While I was job-hunting, I did some work with a friend who installs security systems on yachts. He needed some help with a door access system and so I flew over to Amsterdam for a few days to help program it. Having been used to working on crowded building sites, it was an eye-opener to be sat on a £200-million luxury yacht!

What's your career highlight so far?
So far, the most rewarding thing has to be handing over completed projects. When you've worked on something tirelessly for months at a time, to see the customer happy with it once it's finally completed is extremely rewarding.

Course list

Course	UCAS tariff points	Work placement opportunity	Foundation Year available
BEng (Hons) Electronic Engineering	112–128	-	Y
BEng (Hons) Mechanical Engineering	112–128	-	Y
BEng (Hons) Renewable Energy Engineering	112–128	-	Y
BEng (Hons) Yacht and Powercraft Design	112–128	-	Y
BEng (Hons) Yacht Design and Production	112–128	-	Y
Science and Engineering Foundation Year	48	-	-



How to apply

Solent University code name: SOLNT
Solent University UCAS code: S30
www.ucas.com

1 **Research universities**
March – September

2 **Work on your UCAS application**
September – January

3 **Apply online via UCAS**
By 26 January

4 **Check UCAS Hub**
This is where you'll see if you have an unconditional offer (the place is yours) or a conditional offer (based on exam results or other evidence), or if your application has been unsuccessful.

5 **Reply to your offers**
Select your firm choice. Select your insurance choice – this is a back-up choice in case you don't meet the conditions for your firm choice. Decline your other offers.

6 **Find out if you've got your place**
You'll see in UCAS Hub if your place is confirmed. BTEC results are published from July onwards and A-level results will be published in mid-August.

52 things to do

Prepare for university in less than an hour each week with our tips, guides and quizzes.
www.solent.ac.uk/52-things

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